

C l a i m s

1. A tool guiding device with a base frame (1) and guide rails (2), which are parallel in relation to each other, arranged thereon, on which at least one carriage (3, 4) provided with a processing tool (13, 14) is displaceably linearly guided via a carriage connector (10, 11) by means of a drive mechanism,

characterized in that

the carriage (3, 4) is coupled to the carriage connectors (10, 11) via at least one compensating device (9) having at least one angle compensation element (9.4) and at least one lateral compensation element (9.1, 9.5, 9.6).

2. The device in accordance with claim 1,
characterized in that

the angle compensation element (9.4) is embodied as a ball element or ball section element, which is rigidly connected with the carriage connector (10, 11) and is seated, on its side facing away from the carriage connector (10, 11), in an articulated manner in a ball socket (9.11) of an intermediate piece (9.1) and,

a) that the intermediate piece (9.1) has a further ball socket (9.12) on its side facing away from the ball socket (9.11), in which a further ball element or ball section element (9.5), which is connected with the carriage (3, 4), is seated in an articulated manner, or

b) that on its side facing away from the ball socket (9.11), the intermediate piece (9.1) is seated by means of a roller, ball or sliding bearing with a plurality of rolling,

ball or sliding bodies laterally transversely to the displacement direction of the carriage (3.4) in the latter.

3. The device in accordance with claim 1 or 2, characterized in that

the carriage (3, 4) is maintained and guided on facing tracks (2.3, 2.3') on facing sides of the guide rails (2) by revolving roller or ball units.

4. The device in accordance with claim 3, characterized in that

on the respectively oppositely located sides of the guide rails (2) respective pairs of guide tracks (2.31, 2.32) are arranged, which in cross section are oriented angled or parallel with each other, on each of which a revolving roller or balls unit rolls off.

5. The device in accordance with one of the preceding claims,

characterized in that

in its two end areas located in the guiding direction the carriage (3, 4) is provided with strippers (2.2), at least in the area of the guide tracks (2.31, 2.32), and

for sealing the space between the guide rails (2) and the carriages (3, 4) sealing elements are provided on the latter.

6. The device in accordance with one of the preceding claims,

characterized in that

rail guides (1.1) for fastening the guide rails (2)

have been cut into the base frame (1).

7. The device in accordance with one of the preceding claims,

characterized in that

the guide rails (2) are connected with the base frame (1) from the direction of the side of the base frame.

8. The device in accordance with one of the preceding claims,

characterized in that

the base frame (1) has a table (1.3) and that two guide rails (2) are attached in a vertical orientation to a vertical section extending from below the table (1.3) to above it, and

a gate (1.2) is formed above the table top in the vertical section between the guide rails (2), so that access paths (12) to a treatment location of the tool are provided from four horizontal directions.

9. The device in accordance with claim 8,

characterized in that

an upper carriage (3) is arranged above the table top, and a lower carriage (4) below the table top.

10. The device in accordance with one of the preceding claims,

characterized in that

a passage (9.3) for an ejector (17) is formed in the at least one angle compensation element (9.4) and at least one lateral compensation element (9.1, 9.5).

WO 2004/062901
PCT/EP2004/000015

11. The device in accordance with one of the preceding claims,

characterized in that

a measuring pickup of a measuring system (5, 6) is arranged between two guide rails (2) in the area of the respective carriage (3, 4) for adjusting a carriage position.